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III.—*Fifty Years of Comparative Philology in America*

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THIS is not the first time that a report on the doings of a recent science calls, first of all, for some sort of definition. In the ponderous classification of human knowledge, undertaken by the Congress of Arts and Science, held in connection with the Universal Exposition at St. Louis in 1904, figures the item 'comparative language,' as a subdivision of the history of language, the latter being, in turn, a larger portion of the historical sciences. There is excellent reason for guessing that the rubric 'comparative language' refers to 'comparative philology,' but, on thinking it over, one almost suspects the methodologist who coined this term, in such English as it is, of a solemnly sly attempt to dodge definition altogether. To an outsider, who cannot guess, this caption is hardly as informing as would be 'science of retorts and blowpipes' for Chemistry; the insider, who is bound to guess, will be chilled by its externality, or remote allusiveness. Professor March may have felt something like this, when he opened the session with the statement,¹ that "the scientific study of language takes its facts largely from ancient languages, and interprets them as human institutions by means of which society is organized and man developed. Comparative philology rejoices in unfolding the history of nations. It has sought to find its laws in the forces of nature, the bodily organization, and external habits of life, the influences of climate, the law of least effort working thruout like the law of gravitation. Its success has been as wonderful as that of the astronomers." One can easily guess that this distinguished scholar, even in 1904 a gallant veteran, is glad of the occasion to give an impressionist sketch of a subject he much admired, as a send-off on a festal occasion. There is in it both too much and too little, least of

¹ See *Congress of Arts and Science*, III, 32.

all precision. But I prize such a statement, because it heralds the breadth and manysidedness of a science which, more than any other, has widened outlook on the history and character of man and society, and extended humanistic interest far beyond the bounds of the Mediterranean or Aegean basin, which seemed, prior to comparative philology, to mark its confines.

A teacher of comparative philology is likely to know its practices, its uses, and the appeals which it makes. A sketch of the succession of interests which it has aroused in him will, perhaps, suit this occasion better than analytic definition of its methods and purposes. Recalling his own sensations, he may hope to hear them echoed from the minds of his hearers. At the bottom, and first in order of succession of interests, is unquestionably comparative etymology, aroused even in the dark pedagogic ages by the graceful dilettantism of Trench, *On the Study of Words*—*knight* and *knecht*; *knave* and *knabe*; *boulevard* and *bollwerk*. With a widening horizon English *fee* becomes I. E. *peku*, ‘cattle’; or early glimpses of the *Veda* reveal the Homeric concept *ἀφθιτον κλέφος* as prehistoric = *ákṣitam grávas*, ‘imperishable glory.’ The meaning of *πρέσβυς* is at first ‘leading steer’ (*βυ*, reduced form of *βοv*, ‘cow’) of the ‘spike-team,’ or ‘unicorn.’ Successive touches of the etymologist’s brush shape a picture as colorful as a Grimm’s fairy-tale, and as exquisitely traced as Venetian lace. I question whether, good-natured raillery to the contrary, there is any philologist who in his heart feels cold towards these illuminations, unless he be in a partisan mood *pro domo sua*—and then we can understand and forgive. Max Müller used to speak of words as monuments of feverish thought, but rather than feverish, they are quietly constructive: they enable us to carry on, in a broader field, enquiries which literary documents answer only in part within the sphere of a people of historical times. And here is, in addition, the enchantment of a past which we cannot quite feel other than romantic. Etymology as a phase of humanism, rather than a language item, is still highly recommendable for young and old.

Second in order, tho chronologically from an earlier time, enters the sense that I. E. speech is the same, not only in its lexical content, but in its inflections, or morphology. Bopp had determined the original formative elements and had attempted to find the provenience and original meaning of these formative elements. As regards the former he succeeded, by applying to I. E. speech as a whole the marvelous word analysis of the Hindu grammarians of the Pānīnean school, which treats every Sanskrit word as a product of 'agglutination.' As regards the agglutinative elements themselves, Bopp believed that they originated from independent words (pronouns, adverbs, or verbs), an error which hung as a veritable old man of the sea around the neck of the science down to the late seventies. If I am able to reproduce my own sensations as a learner in those days, I should say that this error had a most beguiling quality. Never did scientific theme seem to unfold itself more completely than language — from the *terminus ad quem* of present-day speech back to the *terminus a quo* of the linguistic protoplasm, out of which it seemed composed. It sounded as satisfying as the resolving chord of a diatonic scale. And now we must record the disenchantment that there is scarcely a single case of certain agglutination provable for the common I. E. speech. Even the singular personal formatives in the verb, *mi, si, ti*, 'I,' 'thou,' 'he,' the 'swagger' examples of agglutination, are no longer confidently derived from personal pronouns: the doubt is more than justified. And there are signs that abhorrence of agglutinative explanations has assumed, in some quarters, the nature of an obsession, considering that the theoretic possibility of agglutination is guaranteed by modern instances (*j'aimerai, lentement, knighthood, plentiful*). The difficulty of proving agglutination in older periods of speech is probably due to the opacity of its materials, resulting from a long and tangled past. We shall return to this later on.

Very early the so-called 'rotation,' or 'mutation,' of the I. E. stop-sounds in Teutonic and High-German (I. E. *trejes* = Lat.

trēs, Engl. *three*, Ger. *drei*; I. E. *duō* = Lat. *duō*, Engl. *two*, Ger. *zwei*), lending itself beautifully to all sorts of schemes and diagrams, enters into the sphere of things that must be reckoned with. When, at a later time, Grimm's law is complemented by sundry other phonetic observations, of which the most important is Verner's law, a sort of dramatic climax is reached. This is the bacterial breeding spot of the notion that phonetic change takes place without exception, and even the latest and most mature discussions of its nature have not made it quite clear why these products of social convention, analogous to fashion, should show this approximately or seemingly undeviating regularity.

At about this time I. E. accent edges on towards the centre of the stage. Verner's law showed the presence in I. E. times of a stress (expiratory) accent, ultimately connected with the structure of the individual word, *i. e.*, an etymological accent. Soon after, Wackernagel proved common traits of I. E. sentence accentuation, which he applied successfully to the explanation of the recessive, or retrahent, accent of the Greek finite verb. A long line of searching studies, in which American scholars take part, follows with such insistence as to remind me of a systematic seminary course on Greek accentuation once held at the Johns Hopkins University. I would remark that without the impeccable record of Vedic accentuation there would be nor Verner's law, nor rational explanation of Greek accent, not to speak of a system of I. E. accentuation. The Vedic scheme of accent is the pearl of price of I. E. tradition. The most organic traits of morphology depend upon it; without it the more delicate features of I. E. word structure could not, imaginably, have been understood.

At the end of the seventies of the last century a duplex movement sets in, which strikes the public eye more than anything that has happened since the prime facts of the science became known. Pragmatically, it is connected with the study of I. E. vocalism, which had kept growing more and more penetrating, and at that time reached its climax. There is

no period in the history of our science which combines in a higher degree creative fervor with solid accomplishment. Brugmann's discovery of the I. E. syllabic nasals, coupled with the recognition of the prehistoric character of the almost imponderable shades of the triad of vowels *e*, *o*, and *a* (where formerly stood alone a monotonous, primordial, glottogonic *a*) is the greatest event in the history of our speech since Bopp's pioneer labors. It is pleasant to remember that a scholar who has been active for many years in America, Professor Collitz, spoke the redeeming word² which rid phonetic history of the incubus laid upon it by supposed primordial short and long *a*.

Combined study of vocalism and accent lead Fick and de Saussure to their brilliant theory of dissyllabic roots or bases, in the wake of the observation that shift of stress may affect the vowels of more than one syllable at one and the same time. This led to a polysyllabic theory worked out boldly, but with a rather larger injection of glottogonic guesswork than that which went with the older theory of monosyllabic roots. It had the effect, too, of shouldering back more and more the notion of primordial 'roots,' which had become shaky for other reasons. In historical times 'root is as root does'; the real primal glottogonic roots, without which, *pace* Sayce and others, no theory of language origin is possible, are obscured rather than illuminated by the dissyllabic theory.

A second current of the same movement is philosophical, or rather psychological. It is based upon a growing appreciation of the influence of association of ideas, and consequent analogical change in every period and every phase of I. E. speech: inflectional element, suffix, lexical word unit, and, finally, also connected phrase and sentence. The new vocalism and the watch for analogy are the hall-marks of the so-called neogrammatical or 'young-grammatical' movement. To this must be added the belief in, or the dogma of, 'inviolable phonetic law,' which has its roots in Schleicher's view of language

² Bezzemberger's *Beiträge*, II, 303 ff.

as a natural growth. It owes in practice a good deal of its commanding position as a working theory to its partnership with analogy. The 'cast-iron' of phonetic law, and the 'india-rubber' of analogy, have remained the tools and the touchstone of all operations in linguistic history from that time on. If we regard the period from Bopp to Schleicher as the first period of comparative grammar; the period from Schleicher to Curtius as the second; then the neo-grammatical period is the third. We are still living within its pale. Signs are not wanting that a new attempt at glottogonic solutions, relative, rather than absolute, may inaugurate a fourth period, destined to be more adroit, but not much more convincing than the glottogony which was gospel faith to the end of the seventies, when the personal inflections of the verb still passed without challenge as forms of the personal pronouns.

I mean by relative glottogonic solutions such as assume on a large scale mechanical 'start-forms,' theoretical in character, unattested by historical evidence, and often shaped as sort of examples in addition which comprise the sum of the discordant features of a given etymological sept. To a certain and limited extent glottogonic constructions are axiomatic, because they lie immediately back of historical forms, as it were in the penumbra, still visible to the eye. The theory that I. E. **s-mós* = Lat. *sumus* etc., presupposes derivation from **es-mós*, where the loss of the originally tonal *e* is due to shift of tone to a syllable after the root, is unavoidable. This is an axiomatic *aperçu* without which linguistic history is not. We have for the I. E. word for 100 no evidence beyond a start-form *kmtóm*, but back of that lies a hypothetical, yet certain *dekm-tó-m*, 'group of tens,' with interesting glimpses into the decimal system of count. In such cases conviction is intuitive, determined by a sort of *tactus eruditus*, which is encouraged to feel certain of itself by common consent. At best such cases are few; they contrast themselves sharply with a widening circle of relative glottogonies that have of recent years invaded the field. Professor Streitberg has a large following

in his explanation of I. E. long vowels of the raised grade, correlative with normal tone grade short vowels — the so-called *Dehnstufe* — which at one stroke apparently eliminates all consonantal bases from ancient I. E. history: *pōt-s*, nominative for 'foot,' is from thematic *pōd-o-s*, etc. But a nominative *pōd-o-s* (or *patér-o-s*, 'father') is pure glottogony and not at all intuitive. A passably searching criticism of this theory may be read in these *Transactions*, xxvi, 1 ff. The theory's most startling aspect is that it collides with masses of rebellious phonetic experience, as when I. E. *ménos* 'mind' does not become **mēns*, or I. E. *klōpo-s*, 'theft,' does not become **klop-s*. With that theory ends the régime, in any sense, of unexceptional 'phonetic law.' In that regard it is revolutionary in principle, as well as in fact, beyond anything whatsoever that has been suggested since the beginning of the neo-grammatical period.

From the day of de Saussure's brilliant *Mémoire sur le système primitif des voyelles* I have counted myself an advocate, as well as an occasional contributor, to the theory of I. E. disyllabic roots or bases. As long as it was a question of the tangible 'set' roots (roots with 'intermediate' *i*) of the Sanskrit grammarians (*jáni-* = Lat. *geni-*, Gr. *γένε-*) the theory involved no fanciful glottogonies. We cannot quarrel, in principle, with its gradual extension to a point where there are left scarcely any monosyllabic 'roots,' because there is little or nothing in the body of I. E. speech which carries us to its primal beginnings. But, in due time, the extension of the theory over all materials, as shown last in Hirth's *Der indo-germanische Ablaut*, has led to a surprisingly large number of start-forms, which look uncommonly as tho they were examples in addition, or composite photographs, made up of all the form items that occur in a supposed etymological sept. Thus *aweqe*, 'speak,' for Gr. *φέπος*, Skr. *vácas*, on account of Goth. *auhjōn* 'to make noise' (p. 132); or *énos*, 'we,' for Lat. *nōs*, Skr. *nas*; and Skr. *asmān*, Lesbic *ἄμμε*, Goth. *uns* (p. 131).

The theories of the *Dehnstufe* and polysyllabic roots may, I think, be held responsible for a renewal of glottogonic speculation on a large, or unrestrained scale, such as is practically unknown in the investigations and settled grammatical treatises directly following the neo-grammatical movement. This is not the place or time to describe its tendencies, or criticize its details, beyond saying that it does not so much aim at ultimate etymological explanation of grammatical elements, as at the derivation of existing formal types from older hypothetic types. The verve, and sometimes the flair, of some of these speculations, whose most insistent representative is Professor Hirth, often compel admiration, and occasionally suggest possibilities. It would be hard to say that one would like to see them suspended; I should rather plead that they be controlled by a little more of that pitiless self-criticism which, paradoxically speaking, would, in a measure, leave them unsaid. With all this goes as a side-partner a tendency to approximate verb and noun, in fact, to turn the body of inflected verbs into nouns, as when, for example, Hirth characterizes the Skr. third plural active form of the perfect as a *casus indefinitivus* in r.³ Hirth, in fact, derives the entire perfect system from a heterogeneous mass of noun-cases which have grouped and adapted themselves to that specialty, in so far as it represents a specialty; we must remember that the tense element in the perfect, at any rate, is by no means stable (I. E. *yoide*, 'he knows'). And there crops out, along with relative glottogony, also its absolute sister, as when we may read⁴ that the Skr. gerund in *tvā* is from the basis *tevā*, 'be strong'; Skr. *grutvā*, 'hearing,' from *gru-tevā*, 'having strength to hear.' As regards the -es, -os stems (I. E. *kléuos* = Gr. *κλέφος*, Skr. *grávas*, 'reputation') Hirth writes as follows:⁵ "I regard -es, -os as an independent word, namely, a root-noun from the root *es*, 'to be.' So, e. g., *grávas*, *κλέφος*, etc., really 'the act of being heard'; Skr. *háras* 'glow,' Gr. *θέρος*, 'summer,' really 'the state of being warm.'"

³ *I. F.* xxxii, 297.

⁴ *I. F.* xvii, 45.

⁵ *I. F.* xxxii, 231.

The last days of Georg Curtius were embittered by the neo-grammatical, radical shift in vocalism, and the collapse of that ultimate philosophic glottogony which he applied, for the last time, to the exposition of an I. E. language, in his *Das Verbum der griechischen Sprache* (1879).

I can fancy that same Curtius, when he hears this, while taking a walk in the Elysian Fields with his cotemporary, Theodor Benfey, another stout glottogonist, turn towards him, and say, "Eh, what!"

Goethe's saying that all progress takes place in a spiral line means, I suppose, that there are periods of retrogression which serve as start-points for a next advance. It is possible that the present inclination to make fresh ventures in the direction of ultimate explanations marks such a period. I remember the temper which seemed, in the youth of the science, to underlie such efforts; it was a sort of exercise of the vital *élan* working towards its own fulfilment, upon a theme clamorous for an *ultima ratio*. Short of that there was no place to halt. But we know better now than we did then, that the total of the history of I. E. speech represents a late time, presumably later than that from which the civilizations of the Aegean are lit up by the light of history. We can therefore not be very sanguine about glottogony on a large scale. History you cannot make without historical materials. Justified in principle, it is chimerical in practice. Should it become the controlling trait of the present-day I. E. grammar, the best we can hope from it, it seems to me, will be a few additional intuitive glimpses such as I have cited above. But there will be many a ten-pin set up only to be bowled over. And I would remark in this connection that something curious has come to pass: the neo-grammarians, who seem in their day to be youthful, storm and stress radicals, turn out to be, in the final showing, most conservative grammarians, since in glottogonic questions they interest themselves not at all. They are content to restore I. E. forms as they looked at some time or another prior to the historical languages from these languages,

and to regard these results as the best thing that can be done with existing means.

I should wish at this point to be relieved by some scholar more competent than I am to outline the present state of the twin chapters of comparative syntax and semantics. In their beginnings both go back to early times; larger or fuller practice is of later date; anything like consummation belongs to the remote future. To the extent to which I. E. morphological types are established, the science holds the resulting start-forms as a hostage, as it were, which must be redeemed by definition of the common I. E. functions of these reconstructed forms. If we find Gr. *Ζεύς*, *Ζῆν*, *Διϝι* = Skr. *dyāus*, *dyām*, *divi*, shaping themselves into an impeccable I. E. *diēus*, *dyēm*, *divi*, radicals, cases, subtle accents, and all, we cannot shirk as precise as possible definition of the prehistoric functions of these forms. And, again, behind this definition lies the ideal of determining the nature and origin of the modulations which yield, in order, nominative, accusative, locative (dative). The task of individual I. E. grammars can here be only preparatory; fundamental or glottogonic analyses by private grammar are illusory; psychological definitions little better.

For tactical reasons American scholarship has been profuse in syntax study of the classical languages, statistic, historic, psychologic, and pedagogic. I seem to savor a tendency to push hard psychologic distinction and subjective sense of origin, imposed upon rather than derived from language. Until very recent times the comparative aspects of function have been treated almost with disdain. That wise Nestor of syntax, Professor Delbrück, is always at pains to reveal to his audience the limitations of his, as it would seem to us, very wide reading in I. E. literature. The ideal implied is, after all, of the very essence of practicalness. I mean, of course, that, in studying syntactic questions, no less than other questions, we must know as much as possible, and not be satisfied with chauvinistic excerpts, when, the Lord knows, the whole is

none too much. Good days are coming, as is shown by recent work in which particularly the study of case-forms⁶ and verb-moods is transferred to the broader field. I note that the idea of verb-kind (continuous, punctuated, perfective) is rapidly displacing in our consciousness the idea of tense, which is now recognized, even in outer circles, as a later adaptive result, not primarily inherent in the familiar tense categories of our grammars (present, aorist, perfect). Granted that functional change is even swifter than formal change; that the long I. E. past is in many respects obscure; and that the very existence of many functional categories may be questioned in remote times, there is yet no road but the straight road from beginning to end. I need hardly say that American scholars will not refuse to pursue it.

Belated, but not least fair daughter of language study, semantics or semasiology is destined to centre upon herself much fond attention. I restrict the term here, as is ordinary, to lexical matters; in a laxer sense, which should be avoided, it refers to much that is better rubricated under syntax. Semantics concern the development and sequence of individual lexical concepts, and, conversely, the manner in which such concepts are recruited and shaded from a variety of primary ideas. For example, the *Veda* has three ancient words expressing totality of different shades: *sarva*, *viçva*, and *çaçvant*, respectively in the sense of 'entire, sound, integer' (*sarva*); 'whole,' in the group or collective sense (*viçva*); and 'whole,' as consisting of a serial chain of units (*çaçvant*). Two of these are practically lost in classical Sanskrit, making room for new recruits (*sakala*, *samagra*, etc.), but *sarva* is retained as the dominating word. Clearly the classical language has lost here permanently nicety of expression or flavor which the Vedic language employs to advantage. The manner in which the idea of 'all' expresses itself in Indo-European would fill

⁶ See, e.g., Professor Petersen's papers "Syncretism in the Indo-European Dative," *A. J. P.* xxxix, 1 ff., 118 ff., whose glottogonic theories, however, need to be tested by time.

a stout volume, not to speak of languages of other families.⁷ The subject, I venture to prophesy, will be taken up by American scholars with some avidity, if for no other reason because it is akin to syntax. I may point, for example, to Professor Meader's paper on the "Development of Copulative Verbs," in our *Transactions*, XLIII, 173 ff.,⁸ or to Professor Buck's essay on "Words of Speaking and Saying," *A. J. P.* XXXVI, 1 ff., 125 ff. It is difficult to predict what kind of collective treatment, parallel with morphology or syntax, will be possible, but one thing is certain, that the subject helps determine the rationale and sequence in the development of lexical meanings, and that it will introduce into translations niceties of interpretation which are easily left dormant in the originals.

This, I believe, is a sufficient exposure of the high points of I. E. grammar, as they might appear to the eye of an observer from the beginning of its time. *Pari passu* has stept, also from a very early date, linguistic science, dealing with the principles that underlie the life, change, and origin of language in general, as distinct from the life history of a single group. I may say, without fear of contradiction, that this wider field is the outcome of I. E. grammar, not forgetting its background of Hindu grammar, to a degree which makes the broader science, historically, the corollary of the narrower.

In this field American scholarship may justly be said to have scored its real triumphs. From Whitney's lectures on *Language and the Study of Language* in 1867, and *Life and Growth of Language* in 1875, down to Leonard Bloomfield's *Introduction to the Study of Language* in 1914, whose title is more modest than its achievement, a steady stream of essays has gone far to clarify and consolidate our knowledge of this most human subject. I will only mention the names of Buck, Collitz, Oertel, and Wheeler—I might mention others.

⁷ Cf. Brugmann, *Die Ausdrücke für den Begriff der Totalität*, Leipzig, 1894.

⁸ Cf., more broadly, Bréal, *Essai de sémantique*, 227 ff. ("De quelques outils grammaticaux").

They are characterized by sound reasoning, wide outlook, and, above all, by abstention from aërial fancies. Good common sense in distinction from mock-profundity, so eminently characteristic of Whitney, has continued thru-out. One may remark that this subject evidently appeals to the organizing instinct of the American mind, for no good American can go to the happy hunting-grounds without having first organized something.

Regularity of phonetic change, if not phonetic law, is now applied as a principle wherever language is studied. The unrivaled historicity of the I.E. languages is largely responsible for this accomplishment, there being, apparently, no scope elsewhere for such perfectly inclusive experiences as are furnished by Grimm's law, when supplemented by the scarcely less striking observations of von Raumer, Grassmann, and Verner. Ironically enough, Jacob Grimm knew little and cared less for physiological phonetics; indeed the older race of comparative grammarians were in the habit of regarding phonetic as the 'history of the letters.' Still such phenomena, or those pertaining to the different guttural series, which have made Ascoli's name ever memorable, must lead and did lead to the study of the physiologic basis of sound, or physiological phonetics, thereby establishing affiliation with another branch of natural science. The need of a reasonable working knowledge of the physical basis of sound led in time to treatises on sound by grammarians for grammarians, in which the experiences of sound history and the natural facts of physiology entered into profitable reciprocity. Sievers' and Sweet's handbooks on phonetics have for a long time been indispensable to comparative grammarians and linguists, and lectures with concrete illustrations, down to the gory larynx of a sheep, have formed part of this teaching. Perhaps I may be allowed to remark that students reach the university from the college with the naïve innocence of a new-born babe in these matters, and that it is not easy to arouse their consciousness as to the manner in which spoken

sound depends upon sound organs. But, when this has been once accomplished, they contrast very favorably with certain teachers, more especially in ancient languages, who are necessarily always around and about 'letters,' as they, perhaps, still call them. These often enter critically into their teaching, but regarding their nature, or even terminology, their minds remain to the end in a state of *tohu wawohu*.

To such an extent is comparative philology engaged in matters of language, historic, philosophic, and biological, that we are apt to forget its other aspects. These are just as important in principle, even tho the data of prehistoric speech reveal them more scantily and hazily. I have in mind, as my hearers might guess, the methodological definitions of philology, in the sense of Boeckh or Ritschl: knowledge anew of everything that was known before; production anew upon the mental retina of those who live today of what was once produced; or reconstruction of antiquity by means of a knowledge and visions of its essential manifestations. One need not be in love with the rather compartmental division of philology — language; literature; mythology and religion; laws and customs; art and archeology; and secular history — in order to realize that some such interests, after all, combine to reflect the life, mood, and thought of a people. Philologists concerned with a people of historical times are bound to transmute Terence's *nihil humanum* into *nihil philologicum*. This is no less true of a prehistoric people, such as the Indo-Europeans, than it is of one of its descendants in historical times. If we but knew. Historic philology deals with solid data in every aspect of life, whereas comparative philology has *voices et praeterea nihil*. But these same voices do record things other than sound, etymology, morphology, and syntax. Like the temperature chart of a fever patient, the record rises to the apex in language and sinks to the low point in matters of literature or art.

We cannot, for example, speak of I. E. literature, because there is none extant. But the germs of our metres are cer-

tainly Indo-European, as was shown long ago by Westphal; and there are those rhythmic alterations of long and short syllables which point to I. E. high-speech, in distinction from colloquial forms. Especially the iambic dipody which transmutes so furiously many Vedic words,⁹ and even word groups, and continues into the settled practices of Sanskrit and Pāli metricians, who change quantities *metri caussa*, has clearly its roots in I. E. beginnings (Gr. *σοφώτερος*, etc.). I go so far as to be intrigued by the taut parallelism of I. E. literatures. Jebb once said, in his stately way, of Greek literature, that, one after another, as the varying needs of expression in each kind was felt, each type of literature was perfected by the creative force of Hellenic genius. Is this less true of Hindu literature with its early hymns and ballads; its epic; its lyric; its drama, a compound of action and lyric echo; its quasi-histories; its fiction; and so on? Compare, respectively, these two literatures with one another and then confront both with what may be found to match them outside of Indo-European literature. The supreme material civilizations of the Aegean basin, Egyptian, Assyro-Babylonian, Hittite, are nearly inarticulate in their existing literary expressions; and the pictographs and linear writing at Knossos, even more than the silence of the Mycenean age, are ominous signs of essential illiteracy. Jewish literature is of a later time, produced under new impulses, to some extent extraneous, and to some extent in a spirit of protest against these very civilizations. I do not wish to be misunderstood as hinting that we can reconstruct from existing materials definite I. E. literary forms, but I am personally convinced that hymn or ballad and small epopee existed among the Indo-Europeans, and that they determined to some extent the lyric and epic modes that seem inherent and in the nature of things in all records of I. E. literary composition.

⁹ See the author in *J. A. O. S.* xxI, 50 ff.; *Vienna Oriental Journal*, xvII, 156 ff.; *J. A. O. S.* xxvII, 72 ff.; *I. F.* xxv, 193 ff.; *Aufsätze Ernst Kuhn gewidmet* (Munich, 1916), 211 ff.

As I am dealing with my theme in a quasi-biographic fashion, I would recall at this point the jubilance evoked in the earlier days of our science by comparative mythology and science of religion. For the existence of a science of religion at all, I. E. comparative mythology, whatever its intrinsic merits may turn out to be, is no less responsible than is comparative grammar for the science of language. Comparative mythology is the rudder and the compass of the science of religion. Now as formerly, the interpretation of many mythic personalities as forces in nature, treated anthropomorphically, is the unshakable foundation of both. This is as true today as it was in the days of Adalbert Kuhn, Theodor Benfey, and Max Müller, but it has been greatly extended by other scarcely less important observations. It is also true that comparative mythology has suffered from the pardonably excessive zeal of its primary promoters — and would that heaven had saved us from many of its secondary advocates. The sometimes rather engaging errors of youthful exuberance were there in abundance. Time was when, as has been said, a cock could not crow in the morning on his native dung-hill without being in the business of staging a sun-myth. For some time it has been the fashion to pour cold water on nearly every item of naturalistic explanation; to pooh-pooh or to declare bankruptcy against the science; and to go to the extent of inviting it to disappear down the stage-trap. Instead of retorting with equally harsh words, I would point out that no rational being can question the propriety, at least, of Indo-Iranian or Aryan comparative mythology. In their outcome Hinduism and Parsim differ as much as it is possible for religions of civilized peoples to differ, yet the *Veda* and *Avesta* are unmistakably two precipitates from a common time and a common sphere of religious thought and practice. There is no sceptic so abandoned as to doubt that the Ahura (Mazda) of the *Avesta* must be understood in the light of the Asura Varuna of the *Veda*; that Avestan Yima, the son of Vivāñhvant, is identical with Vedic Yama, the

son of Vivasant; or that the great sacral practice of extracting, mixing, and offering the intoxicating *soma* drink in the *Veda* has its replica in the *haoma* worship of the *Avesta*. There is scarcely a first-rate mythic personality of the *Avesta* which lacks counter-person in the *Veda*; and the difference in their treatment in the two canons is particularly instructive, because it shows that religious ideas may change swiftly, yet change so that the resulting differences are more informing than drab identity.

I have spoken so recently¹⁰ of I. E. comparative mythology, as to consider myself exempt from repeated argumentation. But I should like to draw the attention, especially of classical philologists, to my opusculum, "Cerberus, the Dog of Hades; the History of an Idea," and ask whether they are, after reading, willing to renounce the explanation of this most fruitful idea: the two-headed Cerberus as a sort of mythic solecism of the dual pair Çabala and Çyāma, the two dogs of Yama, the god of death. These dogs are clearly treated by the Vedic texts as sun and moon, coursing across the sky, so as to interfere with the passage of the souls of the departed on the road to Yama's heaven. But this is only one of their moods; in another they pick daily the candidates for death, since days and nights (sun and moon) destroy the lives of men. With yet another turn they are the predestined *psychopompoi*, for who should know better the way to Yama's blissful heaven in the zenith than the same two coursers across the heavens? Of recent works I should also like to draw attention to Leopold von Schroeder's masterly essay on Herakles and Indra, in which he establishes a common I. E. myth on a secure philological basis. The connection between the two had long been suspected. They, along with the Norse Thor, represent a demiurgic, man-loving, stunt-performing giant or hero, conceived in a popular spirit, with touches humorous and grotesque. Such an impersonation is needed to deal with, or to obviate, the frequent and alarm-

¹⁰ *Religion of the Veda*, 99 ff.

ing failure of water and light. The myth is, perhaps, the most exigent of the long line of those by which a primitive people accounts for and establishes on a sure footing its relations to the outer world. As a matter of fact, nothing whatsoever has contributed more to our understanding of the workings of the human mind than the insight into just this phase of its operations. Nowhere fits better the definition of history as backward prophecy.

The preceding topic encroaches upon what is known as linguistic prehistory, or linguistic paleontology, or, in other words, the reconstruction of I. E. prehistoric antiquity. Here, again, we come into the midst of gusty discussions as to the quality and bearing of our information. On the face of it, the least we can say is, that this information is of very great extent. We find a host of common I. E. words which indicate cultural, economic, and social institutions. Nowhere, however, is there greater need of distinguishing *things* from *words*. For example, the Indo-Europeans knew some kind of ship (Skr. *nāus* = Gr. *ναῦς* = Lat. *nāvis*), which is likely to have been shaped from a hollowed and scraped tree. But the word of itself fits equally well a steam yacht. Hence, properly, all eyes are turned towards the archeological finds in Central Europe, the presumable 'cradle of the Aryans.' Here archeological testimony, from historical back to neolithic times, points to continuous I. E. civilization without break; it would seem natural to interpret prehistoric words for implements and such thru the objects there found. I hardly think that this particular marriage between etymology and archeology has been very fruitful; it does not, in the main, help us to visualize I. E. civilization. Here and there accrues a more precise conception of some implement or habitation, but it does not define such terms as I. E. *rēks*, 'king,' or the word for 'city' (Gr. *πόλις*, Skr. *puris*, Lith. *pilis*). After all this is not as serious as it would seem to be at first sight, because the broad outline is here more important than the details. More important than the precise shape of the

plough is, that agriculture was practiced at all. We do know that there were agriculture, cattle-raising, and domestication of animals; village life and organization; knowledge of seasons, including snowy winter; an elaborate system of decimal count with picturesque names for the principal numerals; larger political organization under some sort of king; sensitive conception of family life; and many other institutions, practices, and observations. It seems to me that the time is not yet when the results of linguistic paleontology, and the objects of prehistoric archeology, all unnamed, be it understood, can be profitably correlated. For the present, at any rate, it would seem best that each science should operate independently; the attempted blend of their results has led to little more than premature and confusing hypotheses.

In contrast with these uncertainties there is one phase of linguistic prehistory which not only lights up the past, but also exercises powerful influence on modern science and, somewhat surprisingly, also on present-day political history. I mean the linguistic ethnology of the I. E. peoples. Scarcely a hundred years ago the belief that all languages were derived from the Hebrew was still spread far and wide. Adam, Eve, and the serpent — they all spoke Hebrew: what could their descendants speak but later dialects of the same language? At the beginning of the nineteenth century Latin was still regarded as corrupted Greek, and the relation of the Romance languages to Latin and to one another was not at all understood. This day, if every egg could be unscrambled, the map of Europe would be a linguistic ethnological chart, largely consisting of I. E. peoples. Every politician and every nationalist is aware of the precise branch of the Indo-European genealogical tree upon which he sits. On the scientific side it has come to pass that almost as soon as a new language is discovered, be it in Crete, or Asia Minor, Mittani, or remote Chinese Turkestan, its pedigree is tested by the methods of Indo-European linguistics. Astonishing as was the dis-

covery of I. E. Tocharian in Turkestan, even more so is the security of touch which enabled our science to assign to it its proper place in the great world. The recently discovered cuneiform Hittite records, dug up at Boghaz-Kiöi in Cappadocia, are at this moment under the jurisdiction of the same class of scholars: with bated breath the last word on the ethnological character of Hittite is awaited from the broad outlook and experienced technique in such matters of I. E. scholars. After all, Nephelokokkygia is not a bad place to live in, if one can thereby become a citizen as good as all that.

I have not said very much about the achievements of American scholarship collectively, or American scholars individually, in all these various fields which, we may now understand, make up the total of pragmatic comparative philology. The beginnings in America of our science are still well within the memory of living scholars. Whitney's great work as a linguist and as a Sanskrit grammarian goes back to an earlier time, but, roughly stated, our scholars' entrance into the counsels and practices of comparative philology does not date back of the neo-grammatical period. In the first volume of the *American Journal of Philology* figures for the first time in English a very modest account of the changed appearance of comparative grammar under the new vocalism, as stated above. Shortly after, with the return from abroad of a number of young scholars, begins our active participation in the details of the science. The new vocalism, of course first, with faint beginnings of the application of the theory of dissyllabic bases; keen recognition of the importance of accent; avid application of the principle of analogy, with its endless chances of detail observation in every quarter of speech; rather heated discussions as to the why and how of 'phonetic law,' along with its enthronement in practice as the supreme arbiter in phonetic history — all the main principles and formulas of the new school are thereafter household words in our linguistic workshops. As a truthful historian I am constrained to say that no great

discoveries attend this renaissance in America, as we may call it: our distinction must be sought rather in complete understanding and doughty coöperation. The names of Bolling, Buck, Collitz, Conant, Edgerton, E. W. Fay, Hempl, Jackson, Kent, Oertel, Petersen, Sturtevant, B. I. Wheeler, F. A. Wood, and not a few others sound well here as abroad. From 1880 on we have shown unflagging interest in every phase of the science; from 1880 on no grammar or manual of an I. E. language, however elementary, can find grace, if not fecundated and controlled by its principles: it may be said emphatically that this permeation of individual grammars is the high reward of our enlightenment. I need but to point to Jackson's *Avesta Grammar*, or Buck's *Oscan and Umbrian Grammar*, to show just what I mean.

This is the time for a word on the inherent difficulties that beset the development of this science in America. There are in our universities no professorships of comparative philology forthright, or pure and simple. When a comparative philologist shows signs of becoming a good comparative philologist he is either elected president of a college — which is uneconomical — or he is made to hitch his car to the star of a particular philology, Sanskrit, Greek, or Teutonic — which is ancillary. I have myself, coming forty years, kept a hand each on the wheel of Indology and on the wheel of comparative philology, and I know that the practical needs of the ever widening field of Indology alone tax to the utmost the resources of any one scholar, and are destined in the end to pass comparative philology into disengaged hands. This is, however, not the most distressing aspect of the matter; worse is, that many important universities in America offer instruction neither in Sanskrit, nor in comparative philology, even tho the two combinedly cover half the world. I should like to impress classical philologists in particular with the urgent need of exercising influence on university authorities and university methods in favor of at least that kind of representation. I believe that such themes as I

have sketched should and do interest classical philologists, no less than the rest of the world. Neither the excuse of preoccupation, nor chilly esotericism, should blind them to the fact that there is in our science that quality of virility and imagination which appeals to young men, at a time when humanistic interest in general is sorely in need of enhancement. Was there ever a time in which philology needs to present its broadest phalanx to an age of iron — yea, and of coal and oil, too? From the ranks of classical philologists have sprung illustrious names in comparative philology, and numerous comparative philologists have in practice returned to the service of classical philology with widened outlook and valuable new equipment.

There is pathos in that comparative philologists in America have neither independent association nor special organ of publicity. For one reason or another their affiliation and productivity have been with this Association and with journals that are in the main classical. I am not by instinct a bibliographer, and I have, for more than one reason, kept low the bibliographic point of view. It might be well for the Association, in continuance of its celebration, to extend a bibliographic mandate to some younger comparative philologist, or, perhaps better, to a small committee, which would include a Modern Language scholar, in order to show, more concretely, how much, and in how many ways, we have been comparative philologists and linguists during the semi-centennium which we are commemorating. It would be a record of true scholarship, and unselfish devotion to a rare intellectual ideal.